

2017 Central Valley Flood Protection Plan Update: Coordinating Committee Update

December 17, 2014

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2017 ROADMAP



Today's Discussion

Where We've Been

- 2017 CVFPP Roadmap

Where We Are

- Overview: Basin-Wide Feasibility Studies

Where We're Going

- Preliminary BWFS Approaches



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Where We've Been

2017 CVFPP Roadmap

Anything worth doing is worth planning.



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2017 CVFPP Update

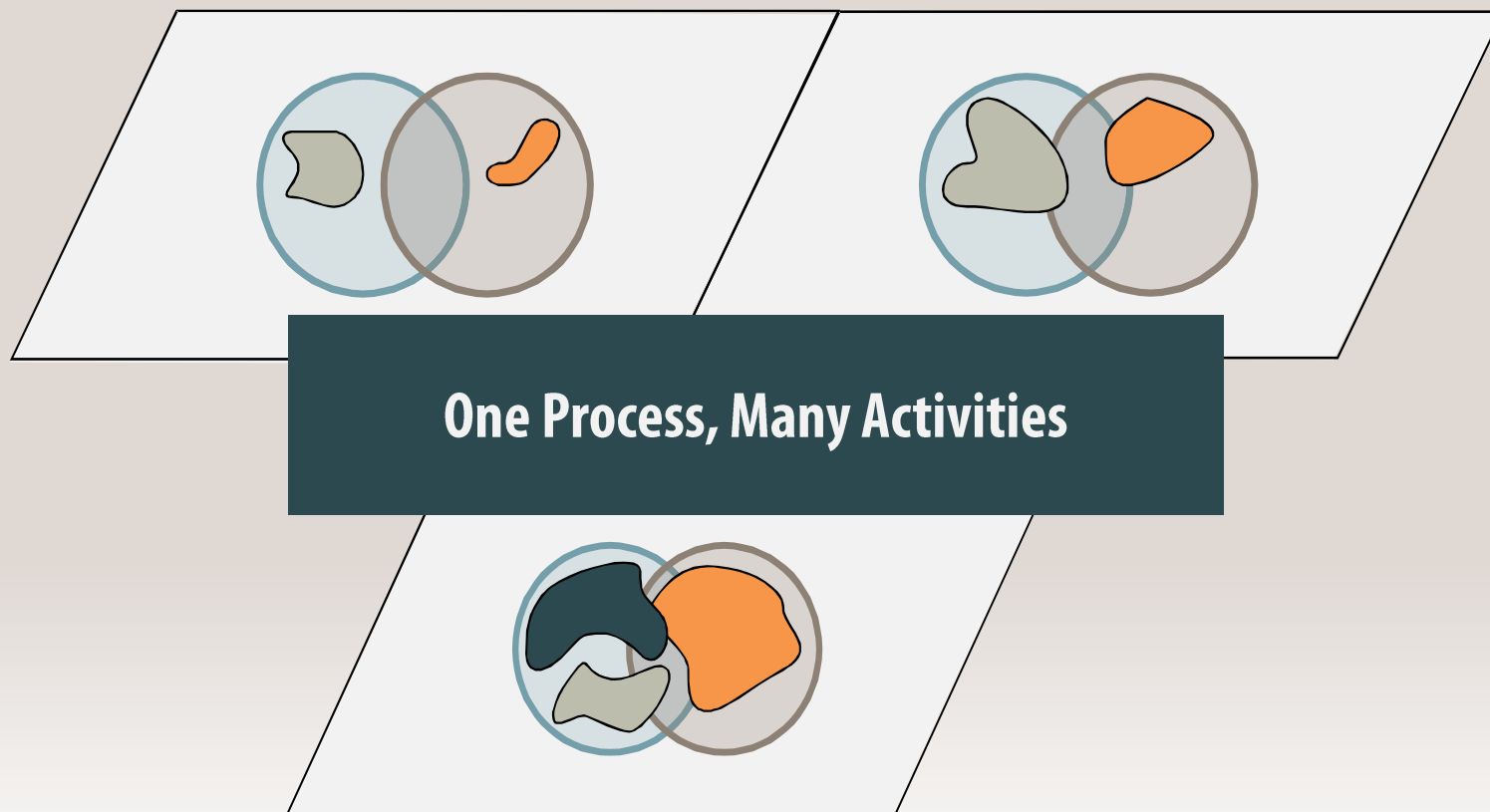
Chapter 1 Context	Setting Historical Context
Chapter 2 Converging	Summary of Refinements and Areas of Alignment
Chapter 3 System Management	Strategies to Improve System Management
Chapter 4 Implementation Timing	Investment Approach
Chapter 5 Measuring Value	Tracking, Reporting of Investment Actions & Results

Exposure is high. Risk is increasing.

- ❖ Varying levels of flood protection
- ❖ One million people and \$70 billion in assets at risk
- ❖ 50 percent of levees structurally deficient
- ❖ Climate change will put additional stress on the system
- ❖ Key species and riparian habitat in crisis
- ❖ Majority of channels lack adequate conveyance capacity



Identifying Alignment



Recommendations for System Management Investments

Chapter
3

System
Management

EXAMPLE RECOMMENDATION YOLO BYPASS

Addresses CVFPP Goals:
Improve flood risk management

Multi-benefit Project:

- Increase flow capacity
- Improve floodplain conditions for rearing juvenile salmonoids
- Increase habitat and improve passage for native fish species
- Improve riparian and wetland habitat and the wildlife they support
- Comply with regulatory requirements (BiOps)
- Integrating with other planning activities, such as Conservation Strategy, BDCP, and BiOps

RECOMMENDATION CATEGORIES



State-Preferred System Improvements



Urban Flood Protection



Small Community Flood Protection



Rural-Agricultural Area Flood Protection



Residual Risk Management



Integrated Ecosystem
and Water Management Actions

EXAMPLE ACTIONS

EXAMPLE ACTIONS

- Flowage easements
- Fix-in-place
- Setback levees
- Emergency response
- Fish passage
- Ring levees
- Storage
- Etc.

- Storage
- Etc.

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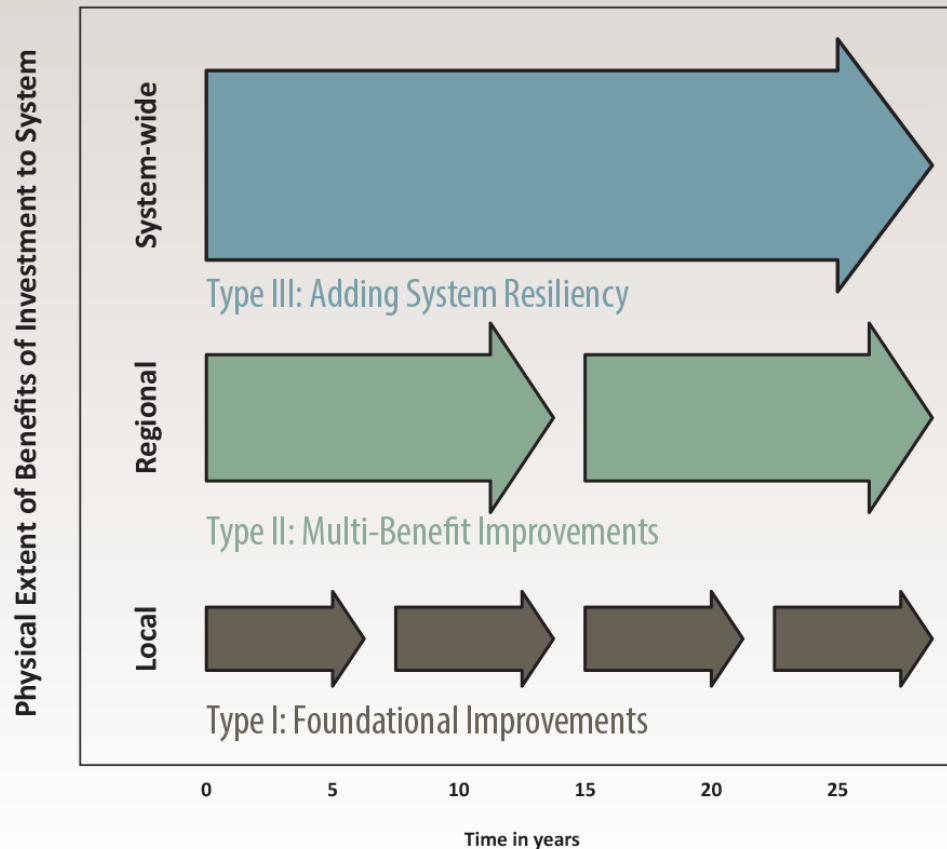
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Continual Implementation

Chapter 4

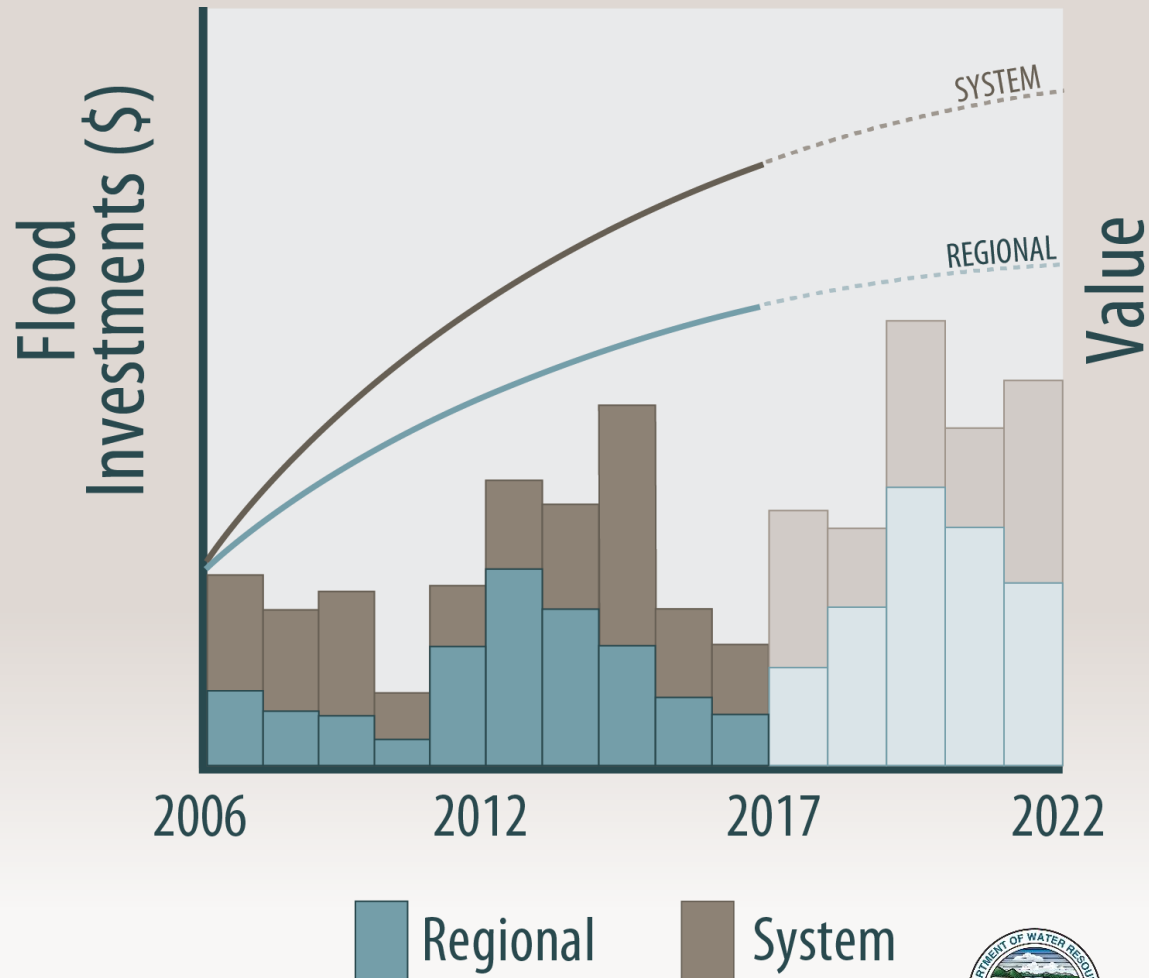
Implementation Timing



- Progress on system and regional benefits concurrently
- Track progress with consideration of scale of benefits

Commitment to Tracking Investment Results

- Value
- Accountability
- Transparency
- Balance in Investment Strategies
- Flood Risk Reduction



Where We Are

Overview: Basin-Wide Feasibility Studies

The best confidence builder is experience.



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Timeline of Significant Events in Sacramento River Basin

1861
State Flood Control Act and Reclamation District Act

1911
State Reclamation Board created

1917
Sacramento Flood Control System authorized by Congress, Sacramento River Flood Control Project begins construction next year

1928
Flood Control Act of 1928 authorizes USACE to design and construct projects for the control of floods on the Mississippi River and its tributaries as well as the Sacramento River

2003
Paterno Decision

2006
Proposition 1E approved by CA voters to finance flood system improvements

2007
SB5 legislation calls for a system-wide approach to flood management

1862

California's Great Flood inundated the entire Sacramento and San Joaquin valleys for 300 miles. Leland Stanford, 8th Governor of California, was said to have needed to row in a boat to his own inauguration



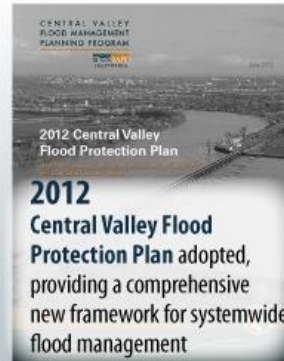
1916
Sacramento Weir constructed

1927

The Great Mississippi Flood of 1927 broke the Mississippi River out of its levee system in 145 places and flooded 27,000 square miles up to a depth of 30 feet, causing over \$400M in damages and killing 246 people in seven states

1955

Christmas Floods cause statewide disaster declaration. A levee on the west bank of the Feather River collapses and sends a 21-foot high wall of water to flood 90 percent of Yuba City. 600+ people were rescued by helicopter, but 37 people drown



1850

1850
First levee built in Sacramento

1900

1907 & 1909
California Floods result in overhaul of planned State flood control designs. The town of La Porte, in the Feather River basin, had 57.41 inches of rain in 20 days, an event with a return period of 12,000 years

1950

1924
Fremont Weir constructed

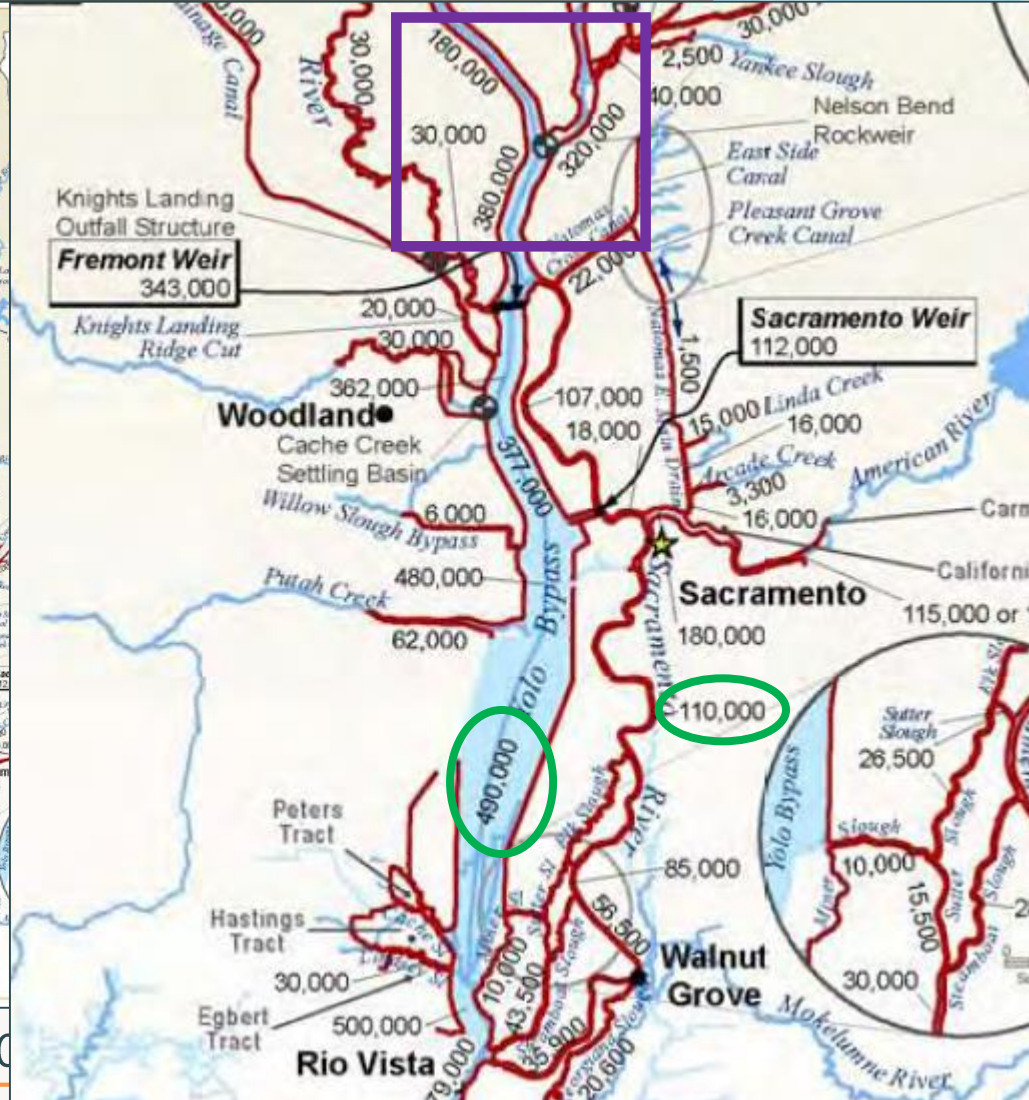
1964
Floods cause 34 California counties to be declared disaster areas, with every major stream in the North Coast producing new high values of extreme peak flows

2000

1997
New Year's Flood sends 100-year peak flows from multiple major rivers colliding to flow into the Yolo Bypass and down to the Sacramento River Delta. Over 120,000 people were evacuated, and every county in Northern California (46) were declared disaster areas

Today

C V F P P State Plan of Flood C
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System Plan Example: Coastal Louisiana Master Plan

Louisiana's Comprehensive Master Plan for a Sustainable Coast

- Released May 2012
- Coastal Louisiana
- Developed near- and long-term lists of \$50B worth of coastal restoration projects over next 50-years
- Embraced a comprehensive approach to flood management and restoration by developing a diverse portfolio of project types



BWFS: Supporting System Management

Plan Recipe

- Provide Context & Set Objectives
- Describe Performance of Several Ideas
- Estimate Cost (Time & \$\$\$) of Recommendation
- Show a Path to Implementation for Recommendation
-

Types of Plans

- Policy Recommendations
 - ✓ Governance (Roles & Responsibilities)
 - ✓ Regulatory
- Strategic (Leadership)
 - ✓ Resource Prioritization (Budget & Staff)
 - ✓ System Investment
- Tactical (Directing Action)
 - ✓ Project Investment
 - ✓ Engagement
- Technical
 - ✓ Meeting Facilitation

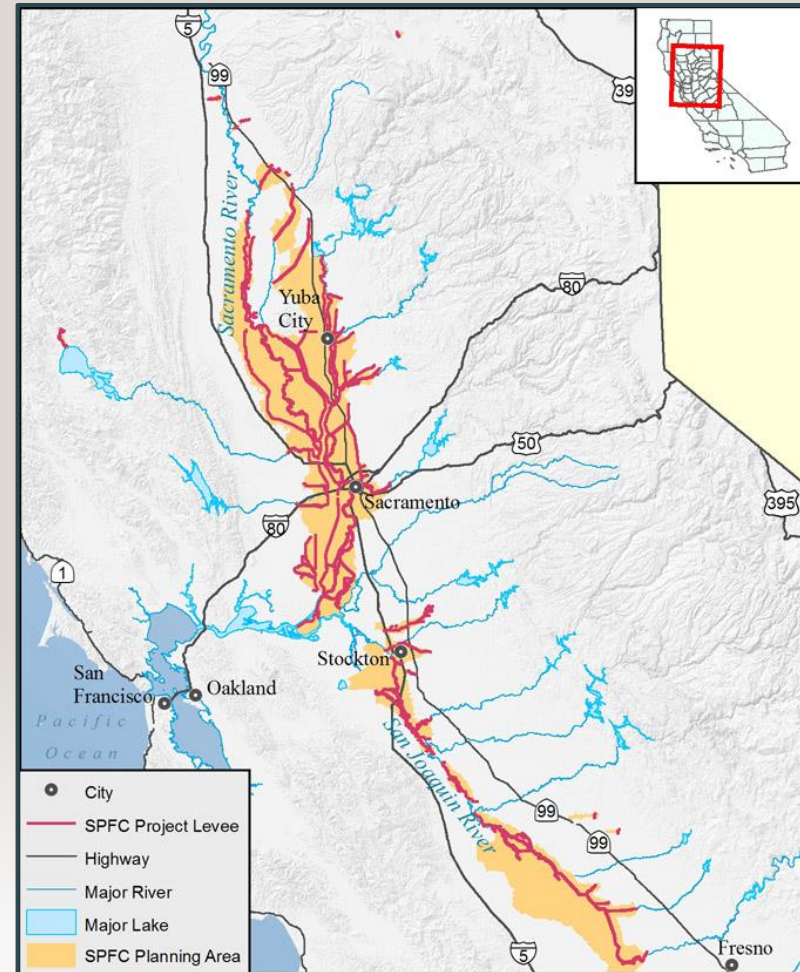
BWFS Purpose & Goals



- Refine system elements identified in the 2012 CVFPP
- Formulate system configurations in Sacramento River and San Joaquin River Basins
- Inform long-term financing and implementation strategies for the SSIA and the 2017 CVFPP Update
- Define a process to integrate RFMP results

BWFS Scope & Desired Outcomes

- Interim Step in 2017 CVFPP Update
- Scope is limited to improving system performance through bypass or weir improvements
- Multi-benefit actions with system-scale hydraulic, economic and ecosystem benefits



System Configurations

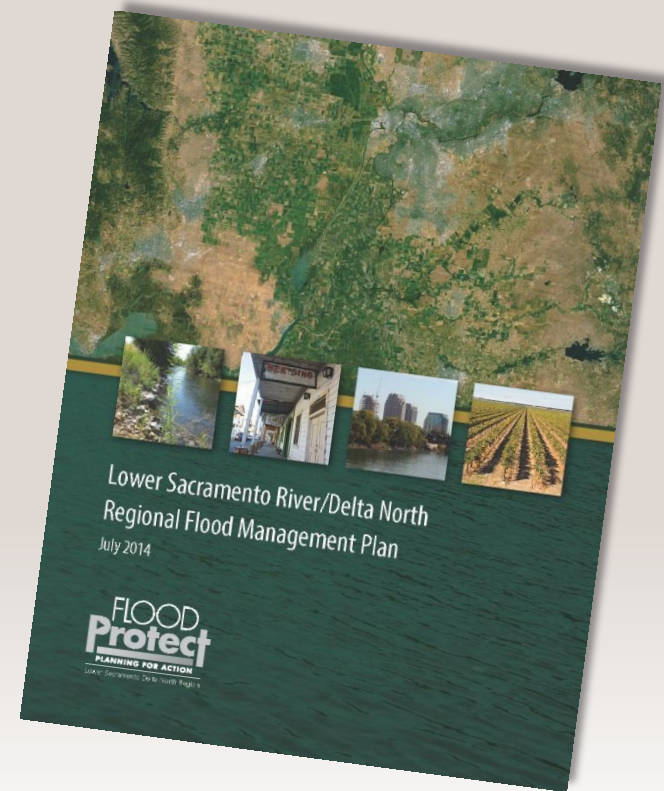
Chapter
2

Converging

Chapter
3

System
Management

- “General Plans” that refine the State’s vision for implementing SSIA outline how individual elements/projects fit together
- Packages of structural and nonstructural actions
- Flexible to account for new information and changes in priorities or systemwide needs
- Informed by regional priorities



Technical Work Underway

Chapter
2

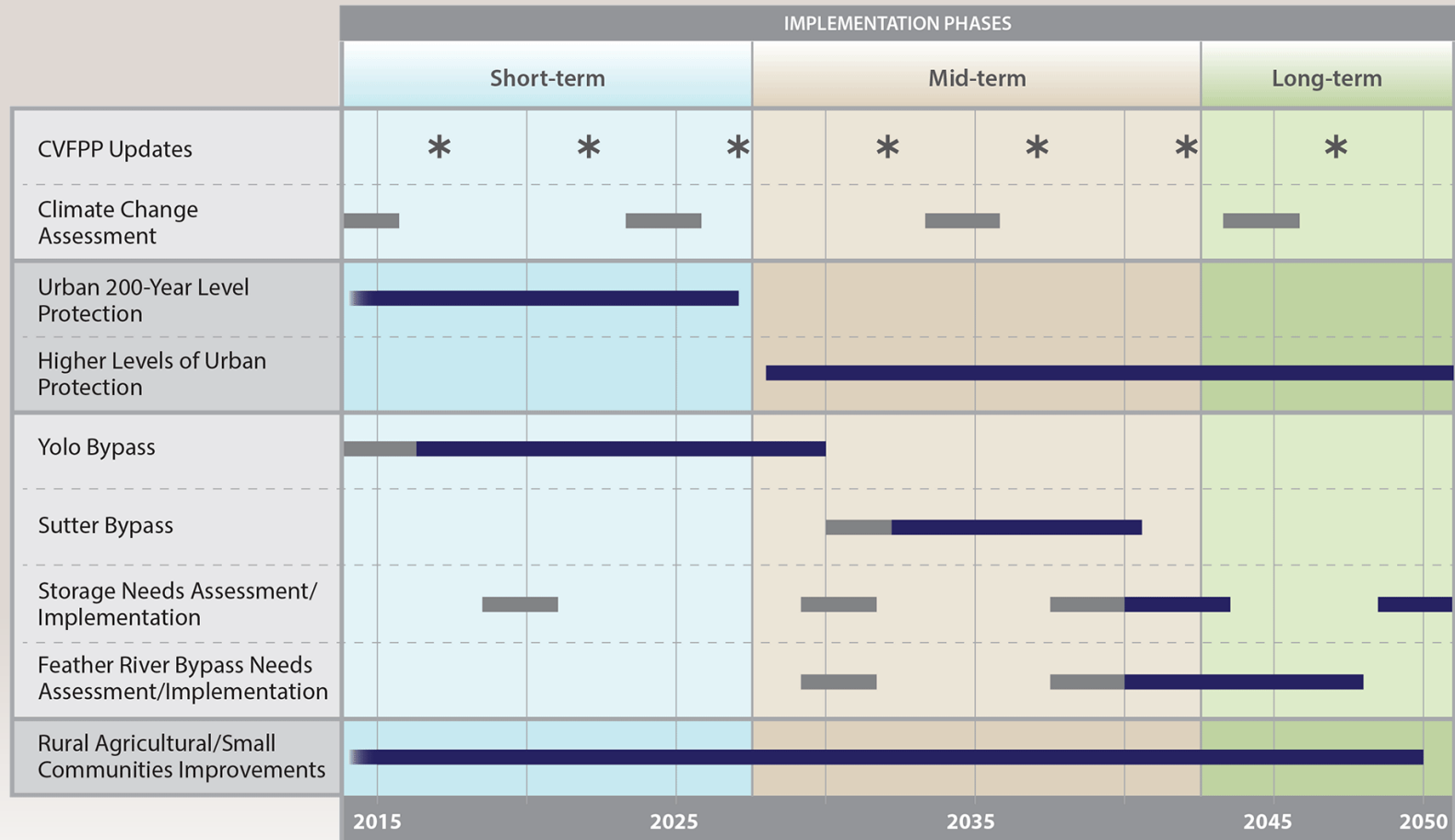
Converging

Chapter
3

System
Management

- Formulating and evaluating several system configurations in each basin
- Technical evaluations ongoing
 - Updated hydrology, including climate change effects
 - With-project hydraulics and flood damage analyses, including representation of ecosystem elements and regional projects
 - Economic benefits analysis: flood damage reduction and ecosystem benefits and other benefits

CVFPP Phasing Implementation Through Adaptive Management – Sacramento System



= Assessments
 = Implementation activities



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Examples of Implementation Programs

- Delta Levee Subventions
- Delta Special Projects
- Flood Emergency Response Planning
- Flood System Repair
- Rural Levee Repair
- Small Community Risk Reduction
- Small Erosion Repair
- Systemwide Flood Risk Reduction
- Urban Flood Risk Reduction



Where We're Going

Preliminary BWFS Approaches

Compromise is a virtue to be cultivated, not a weakness to be despised.



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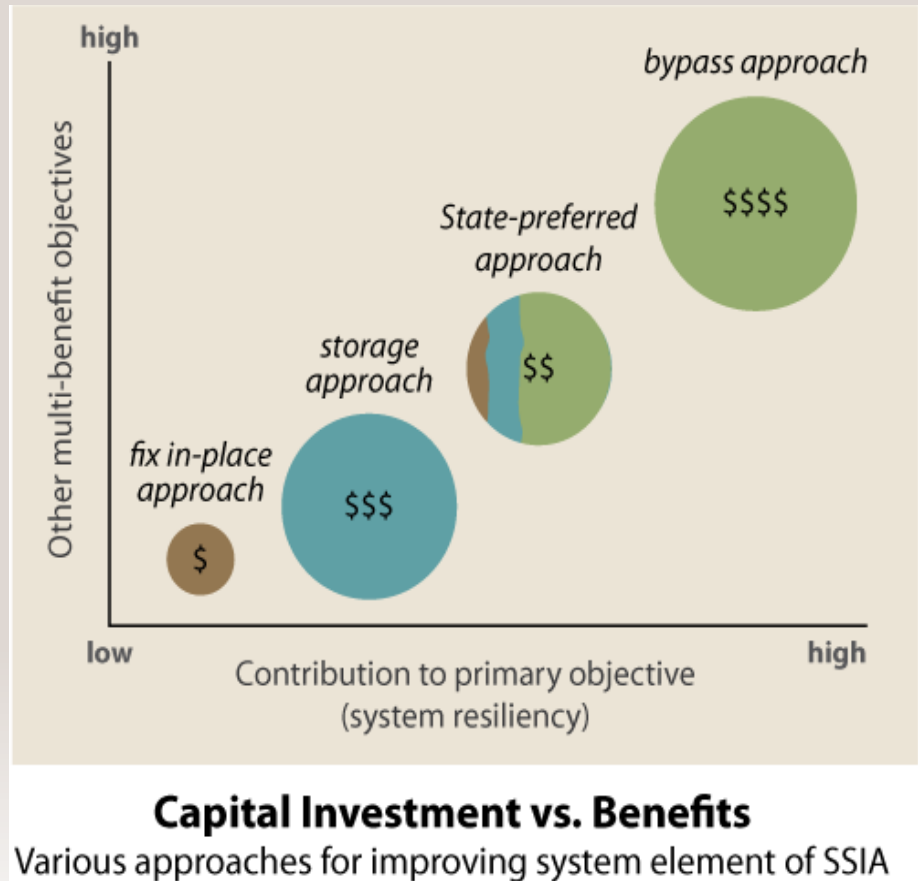


Preliminary BWFS Approaches

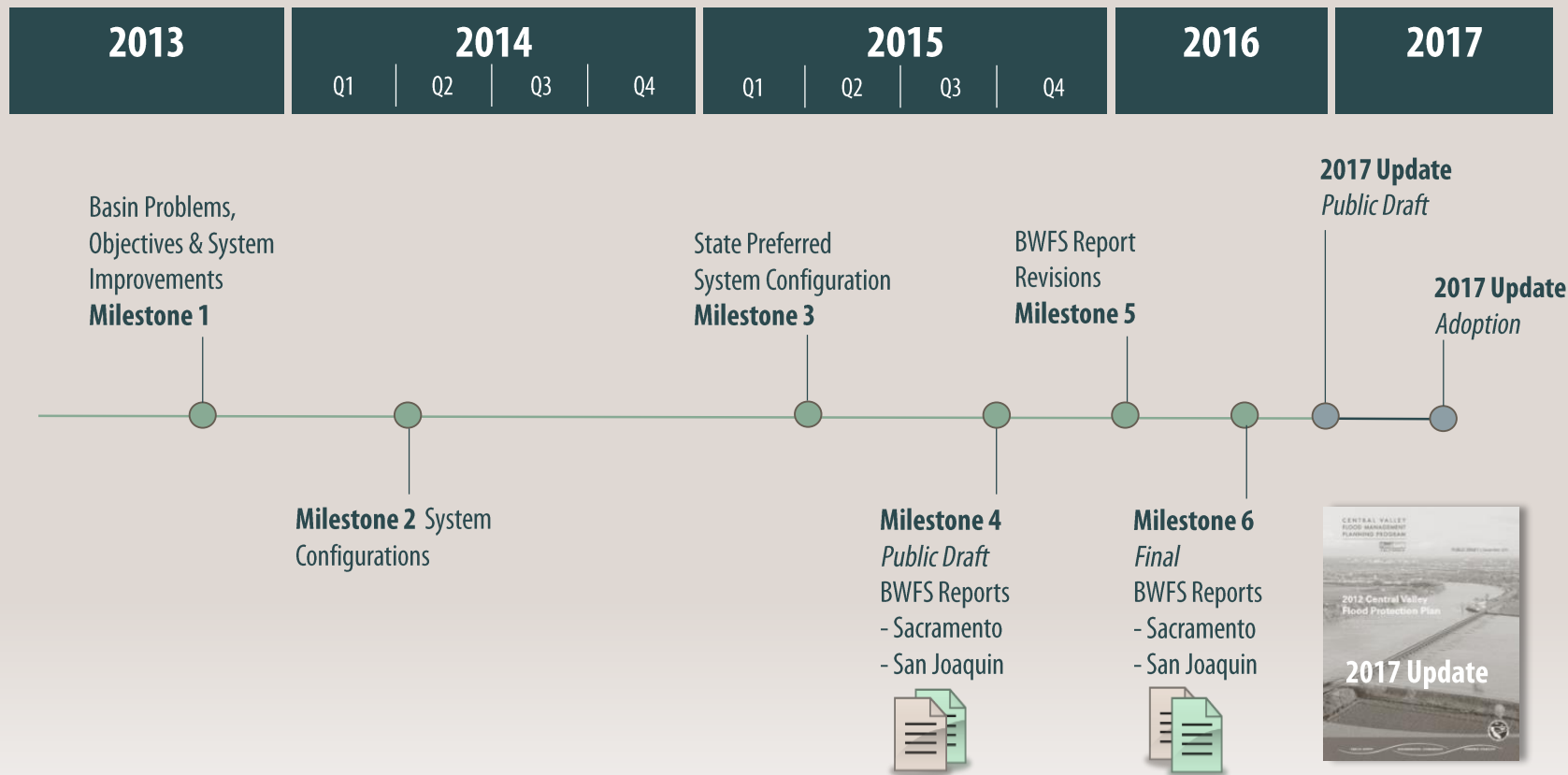
- Approach I: Fix in Place
- Approach II: Build Storage to Store Peak Flood Flows
- Approach III: Expand and Extend Bypasses to Increase Conveyance Capacity of the Flood Management System
- Approach IV: Combination of Approaches I-III

Identifying the State-Preferred Approach

- Consistency with SSIA
- Hydraulic modeling studies/ geotechnical assessments
- Multi-benefit aspects
- Cost-efficiency
- Flexibility for future improvements



Where are we in the BWFS Process?



Story Focus Shifts with Progress

Activities continue across multiple tasks



Proposed Future Updates

Regular CVFPP and Coordinating Committee updates planned:

Venue	Date	Proposed Topic
Coordinating Committee Meeting	TBD (January 2015)	Summary of DWR's RFMP Phase 1 Content Review
CVFPB Meeting	TBD (January 2015)	BWFS Preliminary Technical Work

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